THE ARACHNOID TOURIST

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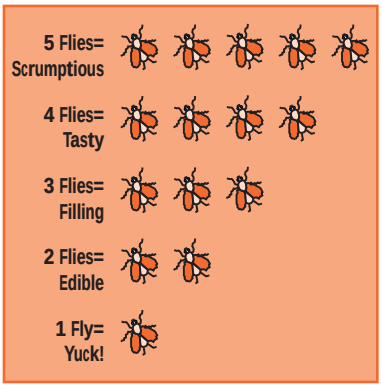
MANAGING A SPIDER'S NET



Having acquired an intranet, the Spider was confronted with the task of managing the damn thing (aka figuring out what's broken and fixing it).

The modern way of doing this is through network management protocols, so the Spider decided to look around.

SNMP & CMIP:
An Introduction to Network Management •
www.concentric.net/~tkvallil/snmp.html
Tyler Vallillee, University of Waterloo
Visited 27 August 1997

The Spider turned to Tyler Vallillee's site for a quick introduction to network management. Vallillee gives us readable and brief overviews of the Simple Network Management Protocol and the Common Management Information Protocol.

SNMP was originally a quick fix, an approach to Internet management put in place until better things could be implemented. In SNMP, each device on the network responds to and creates messages. The device itself is viewed as having a set of registers. There are messages for setting and reading register values (both indexed and unindexed) and a message for reporting network events such as start-ups and terminations.

Some advantages of SNMP are:

- It is simple (hence, easy for a device builder to implement and easy for a tool developer to use).
- It is demand-driven and requires little data (hence, not a strain on network runtime resources).
- It is popular (every device manufacturer includes it).
- It is extensible (a device manufacturer can easily add new registers for monitoring).

However, there are a number of disadvantages as well. SNMP suffers from major security gaps, allowing intruders to access information carried on the local network, send false data across it, and reconfigure network devices. SNMP also provides too low a level of semantics, dealing in the bits and bytes of device state rather than larger conceptual groupings and temporal patterns.

The site reports on two possible alternatives to SNMP. The first is SNMPv2. This version has far better security mechanisms and a richer variable specification language, including subscripted data, or tables. SNMP's complexity has increased as well—the 36-page formal specification of the first version has grown to 416 pages in the second. This complexity has resulted in programs that support only parts of the v2 protocol.

Vallillee also reports on CMIP, a concerted effort begun in the late 1980s to replace SNMP. CMIP supports a much richer data semantics than SNMP, including trigger behaviors and built-in security management. It suffers only from the minor disadvantages of being difficult to program, of requiring an order of magnitude more system resources than SNMP, and of being implemented only for ISO architectures. (The author comments, "I think there is only one network in Canada that is running with a full 7-layer OSI system.")

A fine, gentle introduction.

The Simple Times Index •
www.simple-times.org/pub/simple-times/issues/
Marshall T. Rose, Dover Beach Consulting, Inc.
Visited 27 August 1997

His appetite for SNMP enlightenment whetted, the Spider turned to *Simple Times*, an irregularly published e-zine devoted to the promotion of SNMP. *Simple Times* offers technical articles, industry information, and featured columns.

The collection of issues available at the site (five in 1992, six in 1993, declining to two in 1994, three in 1996, and, alas, no more since then, nor any response from the editor when we asked about future plans) is an engrossing immersion in the world of SNMP. Unlike an introductory text that builds a static model of its subject on the basis of a fixed set of preconceptions, *Simple Times* displays the evolution of its topic over time, a progression from concerns with simple management effects to management in a semantically rich, software-agent–oriented universe.

The Spider also appreciated the sense of humor of the *Simple Times* writers. Editor Marshall Rose explains the economics of electronic publication with, "There's no such thing as a free lunch, but sometimes it costs less to give away food than to collect money." (We hope the IEEE is listening, though we must admit this cuts both ways.

There haven't been many issues of *Simple Times* lately.)

In "Ask Dr. SNMP," Jeffrey D. Case presents simple farm-based wisdom. To describe a successful experiment that proved the object of the experiment a bad idea, he writes: "Don't ever try to teach a pig to sing. It wastes your time and it annoys the pig." On hoping for a message reply when trying to diagnose a cut cable, Case advises: "Sure, almost anything is possible. You can even teach a goldfish to play the piano, if you use enough voltage."

OTHER THINGS

Sated with network management protocol, the Spider shifted his attention to other things.

alphaWorks • www.alphaWorks.ibm.com
David Gee et al., IBM
Visited 27 August 1997 

Some of the hottest topics on the Web are Java, multimedia, and community, so it's a pleasure to encounter one site that features all three. The site gives a great initial impression—one of the most aesthetically pleasing sites the Spider has visited. The site offers a readable balance of graphics and text, hot areas with pop-up explanations, and a neat site map that grows in detail when you point to a node. The Spider rushed to the origins node, which explains:

> alphaWorks is a space where ideas intersect technology. Where Internet thought leaders and users rise to challenges and work together to shape the future of global information infrastructures. alphaWorks goes beyond conventional mechanisms like the "hot-link" to connect communities and form unique new ones—ones that would perhaps not exist otherwise.

Right.

If that means anything (and the Spider has his doubts), alphaWorks will change the future by sharing information and technology.

The Spider crawled to other pages on the site.

"Foundry" contains a lightweight collection of articles on topics such as user interface design, new products, and appropriate uses for public relations technology. For example, we are told:

> This paper argues for Visual Design strategies and methods based not only on the tried-and-true principles of HCI, but to include the user's goals as part of the design process. The user's goals should be interpreted in a broader sense than is traditional for user interface design, since these goals are likely to extend beyond the utilitarian to the realm of visual symbolism and converging media. While one of the major uses of the Web is to treat it as a reference library, it is clear that a robust taxonomy of diverse uses is necessary to identify, and further, how designers must take these goals into account.

This roughly translates to, "Make sure your Web site is not only informative but also entertaining."

Someone needs to whisper to the appropriate IBM VP that this sort of stuff is not going to shape the future of global information infrastructures. (If you want coherent, applicable design advice, the Spider still recommends Jakob Nielsen's articles, which we reviewed in our first column, "The Engineering Web," http://neumann.computer.org/ic/books/ic1997/pdf/w1072.pdf. The articles can be found at Nielsen's Alertbox Web site, http://useit.com/alertbox/.)

Other site offerings include a community exchange section, a free collection of Java software, a newsgroup browser on the free collection of Java software (once again, a pretty interface but not an enormous amount of traffic), several demos, and *Intervisions*, an e-zine that looks at a variety of net-related topics.

Our sampling of *Intervisions* articles ranged from useful to content-free. Your mileage may vary. We tried some of the demos, but haven't been able to get any to work (with errors including Java exceptions, sites not found, demos disabled, and plug-ins uninstalled). Maybe we should have tried harder, but the site managers need to remember the fleeting attention span of a Web crawler. It's not entertaining if it doesn't work.

The Spider gives the site overall high points for style, but IBM will have to work on the content if it's going to change the world. When the Spider wants Java code, the first place he looks is still www.gamelan.com. ■